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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,213	08/30/2001	Gerald B. Strait	POU920010075US1/132-0003	8861

7590

06/04/2004

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EXAMINER

GORDON, CARLENE MICHELLE

ART UNIT	PAPER NUMBER
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2124

DATE MAILED: 06/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

Application No.

09/943,213

Applicant(s)

STRAIT ET AL.

Examiner

Carlene Gordon

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☒ Claim(s) 7,8,20,21,33 and 34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

1. Claims 1-39 have been examined.

***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore,
  - a. "setting a trace data flag to off" (claim 1, line 3),
  - b. "setting said trace data flag to on if said module is registered with a performance analyzer tool" (claim 1, lines 6-7),
  - c. "and trace data flag is on" (claim 1, lines 9, and 12), and
  - d. "receiving from said... a report..." (claim 1, line 15); also,
  - e. "system... processor" of claim 14, and
  - f. "storage medium" of claim 27

must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description:

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Figures 1A and 1B of the drawings filed on January 09, 2002, after the initial filing on August 30, 2001 are not referenced in the Brief Description of Drawings section of the specification. In order for these drawing to be acknowledged, the drawings should be referenced in each applicable area of the specification.

A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because it exceeds 150 words in length. Correction is required. See MPEP § 608.01(b).

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6. The abstract of the disclosure is objected to because it repeats information given in the title. Correction is required. See MPEP § 608.01(b).

***Claim Objections***

7. Claims 7-8, 20-21, and 33-34 are objected to because of the following informalities:

- a. The claims are improperly indented.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 1-39 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

10. The method of claims 1, 14 and, 27 include steps for

- a. "setting a trace data flag to off",  
b. "setting trace data flag to on... ",

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c. "transmitting request... to record trace data" if "trace data flag is on" (claims, pgs. 9, 11, and 13; Abstract, pg. 16; Summary of the Invention, pg. 2; Figure 1).

This subject matter is not properly described in the application as filed. The figures do not include any reference to the "trace data flag". The Detailed Description of the Invention, also, does not reference the "trace data flag". There is not sufficient enough evidence to explain the function or purpose of the "trace data flag". The examiner would need to know why and how the "trace data flag" is used to perform an adequate search for the invention.

### ***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-3, 5-6, 8-9, 11-16, 18-19, 21-22, 24-29, 31-32, 34-35, and 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Berry et al.** (U.S. Patent No. **6,678,883**), hereafter "Berry", and further in view of **Dryfoos et al.** (U.S. Patent No. **6,598,180**), hereafter "Dryfoos".

13. As to claim 1, Berry teaches:

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entering a software application (Figure 14, inherent to enter software application);

setting a trace data flag to off (col. 25, lines 27-33, "...flag is cleared to zero.");

while said software application has not exited, iteratively performing the following steps for each module initiated by said software application (Figure 21; Abstract, "... each instance of a module."):

determining if said module includes trace data hooks (col. 26, lines 35-38; "...determination is made as to whether... hook is encountered...");

if said module includes said trace data hooks and said trace data flag is on: transmitting a request to said performance analyzer tool to record trace data in response to encountering an embedded trace data hook in said module (col. 26, lines 48-51, "... if the trace data flag is true... hook trace data is written..."; col. 11, lines 5-25, "user... has requested... information"); and

if said module does not include said trace data hooks and said trace data flag is on: transmitting a request to said performance analyzer tool to record trace data in response to entry and exit of said module (col. 1, lines 50 – 67, "event-based profiling", "...trace tool may log every entry into, and every exit from, a module..."; col. 11, lines 5-25, "user... has requested... information"); and

receiving from said performance analyzer tool a report based on said trace data (col. 2, lines 64-67, "trace data...interpreted by a user..."; col. 4, lines 1-5, "trace information...produce reports.").

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Berry does not explicitly disclose setting said trace data flag to on if said module is registered with a performance analyzer tool. It does, however, disclose identifying particular loaded modules and segments of an application, as well as, determining if a module is verified, which both imply some type of registration of particular modules. Also, Berry discloses setting trace data flags to true in order to execute tracing. (Berry col. 26, lines 30-35, "...trace data flag... set to true..."; col. 19, lines 5-12, "user...identifying the particular loaded modules..."; col. 20, lines 54-59, "...module has been verified...").

However, Dryfoos discloses turning on a debug indicator to which indicates that a program is to be debugged if the debug registration table indicates this program to be debugged (Figure 4; col. 5, lines 20-33), which also can be interpreted to mean a module is determined to be registered with an analyzer tool so the trace flag should be set to on.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventions of Berry and Dryfoos to use said trace tool of Berry as the debug tool of Dryfoos because it allows the tracing of selected programs executing in a computing environment without affect to other programs.

14. As to claim 2, Berry teaches wherein software application is written in the C++ programming language and not C programming language. The examiner takes Official Notice, however, of the equivalence of C and C++ for their use in the software art. Accordingly, it would have been obvious to one of ordinary skill



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in the art at the time the invention was made to have written the software application in C programming language in Berry because the selection of any known art recognized equivalent language such as C to code the software application of Berry would be a mere substitution of one art-recognized component for another.

15. As to claim 3, Berry further teaches wherein said software application is written in the C++ programming language (col. 2, lines 45-49).

16. As to claim 5, Berry further teaches said trace data in response to entry of said module includes module name and time of module entry (col. 1, lines 53-67, "time-stamped record", "entry-exit records"; col. 2, lines 40-45, "module names"; col. 16, lines 16-33, "trace data includes... timestamp... module name").

17. As to claim 6, Berry further teaches said trace data in response to exit of said module includes module name and time of module exit (col. 1, lines 53-67, "time-stamped record", "entry-exit records"; col. 2, lines 40-45, "module names"; col. 16, lines 16-33, "trace data includes... timestamp... module name").

18. As to claim 8, Berry further teaches said trace data hooks include: function entry; and function exit (col. 1, lines 57-61, "entry into... exit from... function"; col. 11, lines 15-22, "trace hook... method entry or method exit", col. 11, lines 5-8, "methods (sections)").

19. As to claim 9, Berry further teaches transmitting a request to said performance analyzer tool for said report based on said trace data (col. 2, lines 64-67, "trace data...interpreted by a user..."; col. 4, lines 1-5, "trace information...produce reports."; col. 11, lines 5-25, "user... has requested... information").

20. As to claim 11, Berry further teaches determining if said module includes trace data hooks is performed by an operating system service (col. 4, lines 40-41, "processes in an operating system"; col. 11, lines 1-8, "trace data... hooks"; col. 26, lines 35-40, "determination... trace hook").

21. As to claim 12, Dryfoos further teaches an operating system service determines if said module is registered with said performance analyzer tool (Figure 2; col. 2, lines 41-44; col. 3, lines 50-67, "debugger is ... part of operating system", "performs... control functions").

Figure 2 shows the debugging tool is a part of the operating system and implies that this function performed by the debugger is therefore prompted by the operating system, inherently.

22. As to claim 13, Berry and Dryfoos, together disclose transmitting a request to said performance analyzer tool to record trace data in response to entry and exit of said module is initiated by an operating system service.

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Dryfoos teaches of a debug indicator used to signal as to whether a request to the debugger is made (col. 4, lines 62-67, "request to debug"). Also, Dryfoos discloses the debugger as a part of the operating system (Figure 2). Berry, however, teaches recording data in response to entry and exit of a module (col. 1, lines 50 – 67, "event-based profiling", "...trace tool may log every entry into, and every exit from, a module...")

23. As to claim 14, Berry teaches a system for obtaining software performance data, said system comprising a computer processor, said computer processor implementing a method (Figure 2A; col. 6, lines 5-17, "single processor system"). Rejection of claim 1 is incorporated and further claim 14 recites limitations as recited in claim 1, therefore, claim 14 is rejected under the same rationale as claim 1.

24. As to claim 15, Rejection of claims 2 and 14 are incorporated and further claim 15 recites limitations as recited in claims 2 and 14, therefore, claim 15 is rejected under the same rationale as claims 2 and 14.

25. As to claim 16, Rejection of claims 3 and 14 are incorporated and further claim 16 recites limitations as recited in claims 3 and 14, therefore, claim 16 is rejected under the same rationale as claims 3 and 14.

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26. As to claim 18, Rejection of claims 5 and 14 are incorporated and further claim 18 recites limitations as recited in claims 5 and 14, therefore, claim 18 is rejected under the same rationale as claims 5 and 14.

27. As to claim 19, Rejection of claims 6 and 14 are incorporated and further claim 19 recites limitations as recited in claims 6 and 14, therefore, claim 19 is rejected under the same rationale as claims 6 and 14.

28. As to claim 21, Rejection of claims 8 and 14 are incorporated and further claim 21 recites limitations as recited in claims 8 and 14, therefore, claim 21 is rejected under the same rationale as claims 8 and 14.

29. As to claim 22, Rejection of claims 9 and 14 are incorporated and further claim 22 recites limitations as recited in claims 9 and 14, therefore, claim 22 is rejected under the same rationale as claims 9 and 14.

30. As to claim 24, Rejection of claims 11 and 14 are incorporated and further claim 24 recites limitations as recited in claims 11 and 14, therefore, claim 24 is rejected under the same rationale as claims 11 and 14.

31. As to claim 25, Rejection of claims 12 and 14 are incorporated and further claim 25 recites limitations as recited in claims 12 and 14, therefore, claim 25 is rejected under the same rationale as claims 12 and 14.

32. As to claim 26, Rejection of claims 13 and 14 are incorporated and further claim 26 recites limitations as recited in claims 13 and 14, therefore, claim 26 is rejected under the same rationale as claims 13 and 14.

33. As to claim 27, Berry teaches a storage medium encoded with machine-readable computer program code for obtaining software performance data, the storage medium storing instructions for causing a software performance data system to implement a method (col. 7, lines 19-25, "applications... are located on storage devices"; col. 2, lines 45-52, "machine code"). Rejection of claims 1 and 14 are incorporated and further claim 27 recites limitations as recited in claims 1 and 14, therefore, claim 27 is rejected under the same rationale as claims 1 and 14.

34. As to claim 28, Rejection of claims 2 and 27 are incorporated and further claim 28 recites limitations as recited in claims 2 and 27, therefore, claim 28 is rejected under the same rationale as claims 2 and 27.

35. As to claim 29, Rejection of claims 3 and 27 are incorporated and further claim 29 recites limitations as recited in claims 3 and 27, therefore, claim 29 is rejected under the same rationale as claims 3 and 27.

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36. As to claim 31, Rejection of claims 5 and 27 are incorporated and further claim 31 recites limitations as recited in claims 5 and 27, therefore, claim 31 is rejected under the same rationale as claims 5 and 27.

37. As to claim 32, Rejection of claims 6 and 27 are incorporated and further claim 32 recites limitations as recited in claims 6 and 27, therefore, claim 32 is rejected under the same rationale as claims 6 and 27.

38. As to claim 34, Rejection of claims 8 and 27 are incorporated and further claim 34 recites limitations as recited in claims 8 and 27, therefore, claim 34 is rejected under the same rationale as claims 8 and 27.

39. As to claim 35, Rejection of claims 9 and 27 are incorporated and further claim 35 recites limitations as recited in claims 9 and 27, therefore, claim 35 is rejected under the same rationale as claims 9 and 27.

40. As to claim 37, Rejection of claims 11 and 27 are incorporated and further claim 37 recites limitations as recited in claims 11 and 27, therefore, claim 37 is rejected under the same rationale as claims 11 and 27.

41. As to claim 38, Rejection of claims 12 and 27 are incorporated and further claim 38 recites limitations as recited in claims 12 and 27, therefore, claim 38 is rejected under the same rationale as claims 12 and 27.

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42. As to claim 39, Rejection of claims 13 and 27 are incorporated and further claim 39 recites limitations as recited in claims 13 and 27, therefore, claim 39 is rejected under the same rationale as claims 13 and 27.

43. Claims 4, 17, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berry and Dryfoos as applied to claims 1, 14, and 27 above, and further in view of **Bryant et al.** (U.S. Patent No. **6,728,949**), hereafter "Bryant".

44. As to claim 4, Bryant teaches software application is written in the assembler programming language (col. 4, lines 15-20, "pseudo-assembly language").

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventions of Berry, Dryfoos, and Bryant to create a software application written in assembler programming language because it is an art recognized substitution and adds no enhancement over the invention.

45. As to claim 17, Rejection of claim 4 is incorporated and further claim 17 recites limitations as recited in claim 4, therefore, claim 17 is rejected under the same rationale as claim 4.

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46. As to claim 30, Rejection of claim 4 is incorporated and further claim 30 recites limitations as recited in claim 4, therefore, claim 30 is rejected under the same rationale as claim 4.

47. Claims 7, 20, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berry and Dryfoos as applied to claims 1, 14, and 27 above, and further in view of **Baumgartner et al.** (U.S. Patent No. **5,121,501**), hereafter "Baumgartner".

48. As to claim 7, Baumgartner teaches said trace data hooks include: program entry; and program exit (col. 3, lines 45-65, "hook... AA START", "hook AA END").

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventions of Berry, Dryfoos, Baumgartner to include trace data hooks at the entry and exit of an application because it would provide and improved method of software monitoring which permits the detailed tracing of software flow through use of the hooks in question.

49. As to claim 20, Rejection of claim 7 is incorporated and further claim 20 recites limitations as recited in claim 7, therefore, claim 20 is rejected under the same rationale as claim 7.



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50. As to claim 33, Rejection of claim 7 is incorporated and further claim 33 recites limitations as recited in claim 7, therefore, claim 33 is rejected under the same rationale as claim 7.

51. Claims 10, 23, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berry and Dryfoos as applied to claims 1, 14, and 27 above, and further in view of **Applicant Admitted Prior Art**, hereafter "AAPA".

52. As to claim 10, Applicant teaches wherein said report based on said trace data is in graphical format (AAPA, paragraph [0003], "performance data is presented to developer... in a graphical format").

53. As to claim 23, Rejection of claim 10 is incorporated and further claim 23 recites limitations as recited in claim 10, therefore, claim 23 is rejected under the same rationale as claim 10.

54. As to claim 36, Rejection of claim 10 is incorporated and further claim 36 recites limitations as recited in claim 10, therefore, claim 36 is rejected under the same rationale as claim 10.

55. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlene Gordon whose telephone number

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703-605-4226. The examiner can normally be reached on Mon.-Fri. 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703) 305-9662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Carlene Gordon



ANIL KHATRI  
PRIMARY EXAMINER